

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
1 April 2004 (01.04.2004)

PCT

(10) International Publication Number  
**WO 2004/026846 A1**

(51) International Patent Classification<sup>7</sup>: **C07D 253/10**,  
401/12, 403/12, A61K 31/53, A61P 35/00

(21) International Application Number:  
PCT/NZ2003/000210

(22) International Filing Date:  
17 September 2003 (17.09.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
521436 17 September 2002 (17.09.2002) NZ

(71) Applicants (for all designated States except US): **AUCKLAND UNISERVICES LIMITED** [NZ/NZ]; Level 10, 70 Symonds Street, Auckland (NZ). **THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY** [US/US]; 900 Welch Road, Suite 350, Palo Alto, CA 94304 1850 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BROWN, Martin, J.** [US/US]; 2010 Arbryan Way, Redwood City, CA 94061 (US). **DENNY, William, Alexander** [NZ/NZ]; 165 Gossamer Drive, Pakuranga, Auckland, 1706 (NZ). **HAY, Michael, Patrick** [NZ/NZ]; 52 St Leonard's Road, Epsom, Auckland 1003 (NZ). **HICKS, Kevin, Owen** [NZ/NZ]; 26 Duke Street, Mount Roskill, Auckland 1004 (NZ). **GAM-AGE, Swarnalatha, Akuratiya** [NZ/NZ]; Cancer Society

Research Laboratory, 14B Oakdale Road, Hillsborough, Auckland (NZ). **PRULIN, Frederik, Bastiaan** [NL/NZ]; 1052 Scenic Drive North, Swanson, Auckland 1008 (NZ). **WILSON, William, Robert** [NZ/NZ]; 199 Smith Road, RD2, Waiuku (NZ).

(74) Agent: **BALDWIN SHELSTON WATERS**; P.O. Box 852, Wellington (NZ).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **DNA-TARGETED BENZOTRIAZINE 1,4-DIOXIDES AND THEIR USE IN CANCER THERAPY**

(57) **Abstract:** The present invention relates to DNA-targeted 1,2,4-benzotriazine- 1,4-dioxides and related analogues, to their preparation, and to their use as hypoxia-selective drugs and radiosensitizers for cancer therapy, both alone or in combination with radiation and/or other anticancer drugs.

WO 2004/026846 A1